

07/27/00

JCE13 U.S. PAT.



07-28-00

A

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 36.P266

First Named Inventor or Application Identifier

THOMAS A. COCOTIS, et al.

Express Mail Label No. EL582469940US

JCE13 U.S. PAT.

104726/60

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

## ADDRESS TO:

Commissioner for Patents  
Box Patent Application  
Washington, DC 202311. ☒ Fee Transmittal Form  
(Submit an original, and a duplicate for fee processing)6. ☐ Microfiche Computer Program (Appendix)2. ☒ Specification Total Pages 397. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)3. ☒ Drawing(s) (35 USC 113) Total Sheets 11a. ☐ Computer Readable Copy4. ☒ Oath or Declaration Total Pages 2b. ☐ Paper Copy (identical to computer copy)c. ☐ Statement verifying identity of above copiesa. ☐ Newly executed (original or copy)b. ☒ Unexecuted for information purposesc. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 17 completed)  
(Note Box 5 below)i. ☐ DELETION OF INVENTOR(S)Signed Statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).5. ☐ Incorporation By Reference (useable if Box 4c is checked)  
The entire disclosure of the prior application, from which a copy of the  
oath or declaration is supplied under Box 4c, is considered as being  
part of the disclosure of the accompanying application and is hereby  
incorporated by reference therein.

"Express Mail" mailing label number EL582469940US

Date of Deposit 7/27/00

I hereby certify that this paper or fee is being deposited with  
the United States Postal Service "Express Mail Post Office to  
Addressee" service under 37 CFR 1.10 on the date indicated above  
and is addressed to the Commissioner of Patents and Trademarks,  
Washington, D.C. 20231.KRISTY KAPPELMAU  
(Typed or printed name of person mailing paper or fee)Kristy Kappelmau  
(Print name of person mailing paper or fee)

## ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney10. ☐ English Translation Document (if applicable)11. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ 10 Copies of IDS Citations12. ☐ Preliminary Amendment13. ☐ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)14. ☐ Small Entity ☐ Statement filed in prior application  
Statement(s) Status still proper and desired15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)16. ☐ Other: \_\_\_\_\_

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. \_\_\_\_\_

## 18. CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Label

05514

(Insert Customer No. or Attach bar code label here)

or ☐ Correspondence address below

NAME

Address

City

State

Zip Code

Country

Telephone

Fax



CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
TOTAL CLAIMS (37 CFR 1.16(c))		46 -20 =	26	X \$ 18.00 =	\$183.00
INDEPENDENT CLAIMS (37 CFR 1.16(b))		4 -3 =	1	X \$ 78.00 =	\$ 78.00
MULTIPLE DEPENDENT CLAIMS (if applicable) (37 CFR 1.16(d))				\$260.00 =	\$261.00
				BASIC FEE (37 CFR 1.16(a))	\$690.00
				Total of above Calculations =	\$951.00
				Reduction by 50% for filing by small entity (Note 37 CFR 1.9, 1.27, 1.28).	
				TOTAL =	\$951.00

19. Small entity status

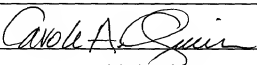
- a. ☐ A Small entity statement is enclosed
- b. ☐ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
- c. ☐ Is no longer claimed.

20. ☒ A check in the amount of \$ 951.00 to cover the filing fee is enclosed.

21. ☐ A check in the amount of \$ \_\_\_\_\_ to cover the recordal fee is enclosed.

22. The Commissioner is hereby authorized to credit overpayments or charge the following fees to Deposit Account No. 06-1205:

- a. ☒ Fees required under 37 CFR 1.16.
- b. ☒ Fees required under 37 CFR 1.17.
- c. ☐ Fees required under 37 CFR 1.18.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED	
NAME	Carole A. Quinn, Reg. No. 39,000
SIGNATURE	
DATE	July 27, 2000

Express Mail<sup>®</sup> mailing label number E158246994015

Date of Deposit 7/27/00

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.110 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D. C. 20231.

KRISTY KADDELMAN

(Typed or printed name of person mailing paper or fee)

Wendy Kaddeleman

(Signature of person mailing paper or fee)

## VIRTUAL PRINT MARKET PLACE

### BACKGROUND OF THE INVENTION

#### 5 Field Of The Invention

The present invention concerns creating a virtual print market place for providing print services, such as photo print services, over a computer network. More particularly, the present invention relates to the creation of a virtual print market place wherein service providers are selected to provide print services to interactive sites, or shops, based on criteria established by the interactive shops as well as market information.

15

#### Description Of The Related Art

In a traditional photographic processing arrangement, a roll of exposed film is dropped off at a photo shop or other retail outlet along with an order designating the desired number and type of prints. The photo shop forwards the film and order to a film processor where the prints are generated

20

along with a set of negatives which are returned to the photo shop where they are picked up by the buyer.

More recently, a buyer may opt to have  
5 digital images created from the exposed film so that the images may be loaded onto a computer system. In addition, it is possible to take a picture using a digital camera that captures the image in a digital format that may be uploaded to a computer system. A  
10 hard copy image such as a picture may also be scanned to capture a digital image of the picture which may be stored on a computer system. Regardless of the manner in which a digital image is created, once stored on a computer system, the  
15 digital image may be displayed and manipulated using software resident on the system (i.e., Adobe Photo Shop).

It is also possible to generate a print out of the digital image using a black and white or  
20 color printer connected to the computer system. However, printers cannot provide the same quality as that provided by a film processor. It is therefore still beneficial to be able to order a photographic quality hard copy (e.g., photographic prints).  
25 Since the digital images are stored on the computer, it would be beneficial to be able to select the digital images and place an order such that both the order and the digital image are sent via a computer network to the film processor or other processing  
30 entity. In so doing, it would be possible to obtain a print or other hard copy (e.g., mugs, T-shirts, photos, etc.) that is of higher quality than printer output or otherwise cannot be generated using a printer.

35 One such scheme is described in U.S. Patent No. 6,017,157, assigned to PictureVision, Inc., which provides a method for distributing digital prints produced from digital images. An image

server stores digital images and related information. An authorized user may access the digital image to order a print from the developer or fulfillment center associated with the digital image. The developer or fulfillment center maintains control over the products ordered from the digital images by completing a price sheet identifying the products to offer and the prices for the products. Initially, an upload interface is used to upload digital images from a photographer or a film developer. Where a photographer uploads the digital images, the photographer selects one of the fulfillment centers to fulfill all orders placed using the images uploaded by the photographer. Anyone authorized to access a digital image may place an order using an order interface that consists of the price sheet of the developer or fulfillment center associated with the digital image.

A problem with this approach is that it is designed to allow the film developer and fulfillment center to retain control over the products offered for the digital images produced from rolls of film submitted to them and the prices of these products. That is, the products and services provided by the image server are controlled by and determined as a result of the digital images that are uploaded to the image server as well as the film developer or fulfillment center. Thus, it is not possible, for example, for the image server to ensure that a certain level or type of product and/or service is provided with respect to digital images that are stored on the image server.

With the advent of the Internet, also referred to as the World Wide Web or Web, various Web sites provide the ability to upload digital images to an image server and to order prints of the uploaded digital images. Traditionally-established

business relationships or alliances between photo print vendors and Web image servers allow the image servers to offer photo print products and services provided by the photo print vendor. A disadvantage of this approach is that the image server site relies on these traditionally-established business relationships. It is not possible for the image server or the photo print vendors to form or modify these business relationships dynamically or interactively.

A computerized quotation system is described in U.S. Patent No. 5,758,328 issued to Giovannoli wherein a potential buyer of a product or service generates a request for quotation ("RFQ") which is forwarded to a centralized quotation system. Under the system architecture described, there is no centralized product/service database. Rather, each vendor maintains its own product/service database and the quotation system forwards the RFQ to potential vendors. The vendors respond by supplying quotations that are forwarded to the buyer. The buyer uses the forwarded quotations to select a vendor from whom the buyer purchases the product or service. The buyer, quotation system and vendor may each set filter conditions that are used to determine which of the vendors receive an RFQ and which of the quotations supplied by the vendor are forwarded to the buyer. Using this approach, the buyer determines which vendor is to be selected from those vendors whose quotations were forwarded to the buyer by the quotation system. There is no mechanism provided that would allow an image server to control vendor selection and/or the product or service that is to be provided by a given vendor.

Accordingly, what is needed is an ability to dynamically create a relationship between image servers and print product suppliers which allows the

image server to maintain control over the photo  
print products and/or services that it offers to its  
users (e.g., photographer or others who upload  
images to the image server), and to allow these  
5 relationships to be transferred such that the print  
products and/or services may be provided by other  
suppliers to other image servers.

#### SUMMARY OF THE INVENTION

10 The present invention addresses the  
foregoing by providing a method performed using one  
or more interconnected computer systems to create a  
virtual print market place wherein market  
information is collected. The market information  
15 including an identity of service providers and the  
services (e.g., print services) and pricing provided  
by each of the service providers, criteria  
established by the interactive shop is used to  
select service providers identified in the market  
20 information to provide a set of print services  
offered to patrons of the interactive shops.

As a result, dynamic relationships may be  
formed interactively between interactive shops and  
service providers to provide print services offered  
25 to patrons of the interactive shops. Further, the  
interactive shops have the ability to maintain  
control over the print services provided and the  
service providers that provide the print services.  
Examples of services include, for example,  
30 generating digital, and/or, print output from input  
such as digital data and/or images as selected by a  
patron of the interactive shop. Examples of such  
output include, but are not limited to, print or  
photographic quality output using a media provided  
35 by a service provider including paper (photographic  
quality or otherwise), transparencies, mugs, T-  
shirts, posters, etc. An output product may also be  
in the form of digital output representing, for

example, presentation visuals for use with presentation software. In addition to these examples of services, a service provider may further provide products such as picture frames or packaging materials as well as other services.

5 In another aspect, the present invention is a method, using one or more interconnected computer systems, of creating a virtual print market place wherein market information is collected that  
10 includes an identity of service providers, interactive shops, a standardized set of print services and pricing provided by each of the service providers, a supply bid is obtained from a service provider identifying a print service and terms for  
15 providing the print service, a purchase bid is further obtained from an interactive shop identifying the print service and terms for purchasing the print service and a relationship is established between the service provider and the  
20 interactive shop when the terms of the print service and the interactive shop are compatible wherein the service provider agrees to provide and the interactive shop agrees to purchase the print service according to the terms.

25 The foregoing aspect provides a market place wherein relationships may be dynamically formed between service providers and interactive shops for the supply and purchase (respectively) of print services. These relationships may then be  
30 modified to form new relationships between different interactive shops and/or service providers.

This brief summary has been provided so that the nature of the invention may be understood quickly. A more complete understanding of the  
35 invention can be obtained by reference to the following detailed description of the preferred embodiments thereof in connection with the attached drawings.



BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an outward view of a hardware environment embodying the present invention.

5 Fig. 2 is a block diagram of the internal architecture of a personal computer for use in conjunction with the present invention.

Fig. 3 is a block diagram of relevant internal architecture of computer servers used in conjunction with the present invention.

10 Fig. 4 is an overview of an order flow involving a market portal, interactive photo shop, and photo service provider according to the present invention.

15 Fig. 5 illustrates a flow diagram of process steps to respond to such requests received by market portal 403 according to the present invention.

20 Fig. 6 is a flow diagram of process steps to respond to a selection criteria administrative request according to the present invention.

Fig. 7 provides a flow diagram of process steps to respond to an order message received by market portal 403 according to the present invention.

25 Fig. 8 provides a flow diagram of process steps to respond to an order status message according to the present invention.

30 Fig. 9 is a flow diagram of process steps wherein participants may bid on all or a portion of new and existing agreements according to the present invention.

35 Fig. 10 is a flow diagram of process steps wherein participants may bid on all or a portion of new and existing agreements according to the present invention.

Fig. 11 is a flow diagram of process steps wherein participants may bid on all or a portion of

new and existing agreements according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

5           Fig. 1 is an outward view of representative computing hardware embodying the present invention. Shown in Fig. 1 are computer 1 executing a browser-enabled operating system, such as Microsoft Windows98®, display monitor 2 for displaying text  
10           and images to a user, keyboard 4 for entering text and commands into computer 1, and mouse 5 for manipulating and for selecting objects displayed on display monitor 2. Also included with computer 1  
15           are fixed disk drive 6, in which are stored application programs, such as a World Wide Web browser application, data files, and device drivers for controlling peripheral devices attached to  
20           computer 1, floppy disk drive 7 for use in reading data from and writing data to floppy disks inserted therein. Data and/or applications may also be  
25           accessed from a CD-ROM via a CD-ROM drive (not shown) or over a network to which computer 1 may be connected (network connection not shown). Printer 8  
            is used to output hard copy images under control of an application program and device drivers executing  
            on computer 1, and may be an ink jet printer, a laser beam printer or the like.

            Computer 1 further includes a serial modem (not shown) connected to telephone line 9 which, in  
30           turn, is connected to World Wide Web 10. It should be noted that computer 1 may be connected to World Wide Web 10 by other types of connections. By  
            executing a web browser application, web pages and associated data can be received from World Wide Web  
35           10 over telephone line 9 for display on monitor 2.

            Also connected to World Wide Web 10 is web server 15, which receives requests for web pages from such web browsers and sends the pages to a

requesting browser over World Wide Web 10. As is described in more detail below, web server 15 includes program code configured to receive requests for web pages and send pages to the requesting browser to assist a user of computer 1 to upload digital data (e.g., digital images) to web server 15 and/or purchase output generated from the uploaded digital data in an interactive shop.

Web server 15 preferably further includes a browser application for connecting to web server 16 via World Wide Web 10. Web server 16, as described below, preferably includes a database of market place information. Using web server 16, web server 15 can access and update database information located on server 16. Web server 16 includes program code configured to provide a market portal or gateway such that an interactive shop application that executes on web server 15 can order products and/or services from service provider software that executes on web server 17. Web server 17 preferably includes a browser application for connecting to web server 16 via the World Wide Web 10.

Like computer 1, web servers 15, 16 and 17 are computing systems that are preferably executing a browser-enabled operating system, such as Microsoft Windows98®, and may include a display monitor 2, keyboard 4 for entering text and commands and mouse 5 for manipulating and for selecting objects displayed on display monitor 2. Web server 15, 16 and 17 further include one or more disk drives (e.g., fixed disk drive 6, floppy disk drive 7 and/or a CD-ROM drive), in which are stored application programs, data files, and device drivers for controlling peripheral devices.

A floppy disk drive, such as floppy disk drive 7 may be used to read data from and write data to floppy disks inserted therein. Data and/or applications may also be accessed from a CD-ROM via

a CD-ROM drive (not shown) or over a network to which web servers 15, 16 and 17 may be connected (network connection not shown). A printer (e.g., printer 8) may also be connected to one or more of web servers 15, 16 and 17 to output hard copy images under control of an application program and device drivers executing on the web server, and may be an ink jet printer, a laser beam printer or the like.

Web servers 15, 16 and 17 further include a serial modem or other interface (e.g., ethernet card) to connect to computing systems directly or, indirectly, via the World Wide Web or other communications network (e.g., local or wide area networks).

Fig. 2 is a block diagram of the internal architecture of computer 1. Shown in Fig. 2 are CPU 20, which is preferably a Pentium-type microprocessor, interfaced to computer bus 22. Also interfaced to computer bus 22 are printer interface 25, to allow computer 1 to communicate with printer 8, modem interface 26 to enable communications between computer 1 and its internal modem, display interface 27 for interfacing with display monitor 2, keyboard interface 28 for interfacing with keyboard 4, and mouse interface 29 for interfacing with mouse 5. Of course, if computer 1 connects to World Wide Web 10 by a connection other than a telephone connection, a suitable interface other than modem interface 29 may be utilized.

Read only memory (ROM) 31 stores invariant computer-executable process steps for basic system functions such as basic I/O, start up, or reception of keystrokes from keyboard 4.

Main random access memory (RAM) 32 provides CPU 20 with memory storage which can be accessed quickly. In this regard, computer-executable process steps of a web browser or other application

are transferred from disk 6 over computer bus 22 to RAM 32 and executed therefrom by CPU 20.

Also shown in Fig. 2 is disk 6 which, as described above, includes a windowing operating system, a web browser executable on the particular windowing operating system, other applications which may include word processing, spreadsheet, graphics, gaming applications as well as applications downloaded from World Wide Web 15 (e.g., an interactive shop interface application). Disk 6 further includes data files and device drivers as shown.

Aspects of the invention are described herein with reference to digital images used to generate photographic output using photo print services provided by a photo service provider. However, it should be apparent that any type of data and/or digital data may be used (including, but not limited to, digital image data) as input to generate an output product. Further, it should be apparent that any type of output product may be provided using aspects of the present invention. Thus, while the invention is described with reference to print output, and in particular to photo print output, it should be apparent that other forms of output, including rendered or print image output, may be generated by a service provider from the input provided to the service provider.

Fig. 3 is a block diagram of several relevant components internal to web servers 15, 16 and 16. As shown, web server 15 is connected to World Wide Web 10 via World Wide Web connection 40, which may be a telephone line, a T1 line, a local area network connection or the like. In a case that World Wide Web connection 40 connects directly to a local area network, the local area network is preferably connected to a router (not shown), which, in turn, is connected to World Wide Web 10. In such

a configuration, the router includes firewall software for prevention of unauthorized access to the local area network.

5 Data packets received over World Wide Web  
10 (IP packets) travel over connection 40 to TCP/IP  
layer 41 wherein the TCP portion of the packet is  
removed and an HTTP or, in a case of a secure (e.g.,  
encrypted) packet, an HTTPS packet is forwarded to  
HTTP server 43 or HTTPS server 53, respectively.  
10 HTTP server 43 or HTTPS server 53 forwards requests  
contained in the packet that are directed to an  
interactive shop application such as interactive  
photo shop application 47.

Interactive photo shop application 47  
15 processes requests received from HTTP server 43 and  
HTTPS server 53 and constructs web pages from HTML  
templates and image files stored in file storage 44  
in response. A response may be forwarded to a  
requester via HTTP Server 43 or HTTPS server 53,  
20 TCP/IP Layer 41 and World Wide Web 10. File storage  
44 may further include Java applets, which are  
programs executable by a Java Virtual Machine  
contained in a browser application. These Java  
applets can also be sent over World Wide Web  
25 connection 40 to a requesting browser application to  
provide additional browser functionality.  
Interactive photo shop application 47 may also  
extract information from a database such as photo  
shop database 45 to construct web pages.  
30 Preferably, photo shop database 45 includes photo  
shop information such as information regarding a  
patron of the interactive photo shop, uploaded  
digital images and the like.

Web server 15 further includes  
35 administrative interface 46 comprising a programming  
interface having functions and other program code  
for interfacing with market portal application 51  
executing on web server 16. In a case that

administrative interface 46 interfaces with market portal application 51 over World Wide Web 10, web server 16 includes TCP/IP Layer 41 and either or both of HTTP server 43 and HTTPS Server 44 as well as file storage 44 functioning much the same as described above with respect to web server 15. As is discussed more fully below, using administrative interface 46, web server 15 can transmit selection criteria for selecting photo service providers and placing photo service bids, place an order for photo print services, etc. to web server 16.

Market portal application 51 executing on web server 16 receives and processes requests from interactive photo shop application 47 via administrative interface 46 over World Wide Web 10 as previously described. In addition, market portal application 51 receives and processes requests from a service provider application such as photo service provider application 55 executing on web server 17 via administrative interface 46. As is discussed in more detail below, such requests may include registration, metrics, bid, and selection criteria requests. A print service database such as photo print service database 54 is accessed by photo service provider application 55 and stores, among other things, product and pricing information which is preferably forwarded to market portal application 51 via administrative interface 46.

A market portal (e.g., web server 16) is configured to establish a dynamic relationship or agreement that may replace or augment a traditional business relationship. Such a relationship is formed between interactive photo shop (e.g., web server 15) and a photo service provider (e.g., web server 17) such that the photo service provider is able to provide photo print services in response to orders placed by patrons of the interactive photo shop. Such relationships may be established between

any of the interactive photo shops and photo service providers that are registered or otherwise authorized to participate in the market portal. An interactive photo shop may order photo prints from more than one photo service provider (e.g., 3x5 prints from one photo service provider and 4x6 prints from another). Similarly, a photo service provider may supply prints to one or more interactive photo shops.

Figure 4 is an overview of an order flow involving a market portal, interactive photo shop, and photo service provider. The order flow depicted in Figure 4 is preferably undertaken such that information flows between an interactive shop such as interactive photo shop 402, market portal 403 and a service provider such as photo service provider 404 using World Wide Web 10 and administrative interface 46.

Initially, patron 401 transfers one or more digital images to interactive photo shop 402 which are stored in photo shop database 45. Patron 401 may be a photographer, film developer, etc. Interactive photo shop 402 provides an interface comprising web pages that allow an authorized patron 401 to order a photo or other hard copy product (e.g., T-shirt, mug, poster, etc.) of the digital image. In addition, patron 401 provides payment information. Payment may be accomplished using any payment scheme (e.g., credit, debit, or smart cards, electronic money, etc.).

Interactive photo shop 402 forwards the order to market portal 403 and market portal 403 identifies photo service provider 404 to fill the order. Photo service provider 404 has either been previously selected, or is selected after the order is received, using criteria established and communicated by interactive photo shop 402. That is, using the selection criteria, market portal 403



selects photo service provider 404 based on the information contained in a market database such as photo market database 52.

5           Market portal 403 forwards the order to  
photo service provider 404. The order identifies  
the items ordered and further provides information  
to allow photo service provider 404 to retrieve the  
digital image(s) to be used with the ordered items.  
For example, the order may include a Uniform  
10   Resource Locator (URL) that identifies the file that  
contains the digital image and the location of the  
file (e.g., photo shop database 45). Photo service  
provider 404 generates a request for the digital  
image(s) that is directed to interactive photo shop  
15   402. Preferably, the request is not sent by way of  
market portal 403. This reduces the traffic that  
flows through market portal.

          Photo service provider 404 uses the  
received digital image(s) to prepare the requested  
20   items. Photo service provider 404 sends order  
status information to market portal 403 and ships  
the completed items to patron 401. Once the ordered  
items are shipped, photo service provider 404 sends  
a "completion" status to market portal 403.

25           Upon receipt of the "completion" status,  
market portal 403 distributes payment or causes  
payment to be distributed using any of a number of  
payment scenarios. For example, in one payment  
scenario in addition to paying photo service  
30   provider 404, interactive photo shop 402 receives a  
payment (e.g., a commission or royalty) as well as  
market portal 403 (e.g., a service fee). In another  
scenario, interactive photo shop 402 subsidizes  
patron 401's payment. In this case, payment  
35   received from interactive photo shop 402 and patron  
401 might be distributed between photo service  
provider 404 and market portal 403.

Objective and/or subjective feedback regarding the order process may be provided by and supplied to the participants. For example, patron 401 may provide feedback that identifies the level of satisfaction with photo service provider 404 (e.g., the quality of the delivered service and/or products) and interactive photo shop 402. Market portal 403 may provide (with or without a charge) feedback to either interactive photo shop 402 and photo service provider 404. In addition, as each order passes through market portal 403, it is able to provide metrics such as number and price of ordered items as well as which interactive photo shop 402 and photo service entity 404 were involved in each order. Interactive photo shop 402 may use this feedback to redefine its selection criteria, for example, to obtain better priced, and/or better quality, products. Photo service provider may use the feedback to redefine its products and/or pricing structure.

Market portal 403 receives messages in addition to those containing order requests. Figure 5 illustrates a flow diagram of process steps to respond to such requests received by market portal 403. At S502, a determination is made whether a message is received by market portal 403 and the type of message that is received. For example, market portal 403 is configured to respond to inquiries by a potential market participant. In such a case, market portal 403 responds at S503 with one or more web pages containing information about the market portal that may include terms of participation and the process for becoming a participant (e.g., process for downloading administrative interface 46 and registration).

In a case that market portal 403 receives a request from a current or perspective participant for software, market portal 403 may first request

information from the participant at S504 using a registration interface, for example. Such information may include the participant's name, address, email address, URL, phone number, name and number of a contact in the case that the participant is a company, for example.

The information received at S504 is then validated. This process may entail performing data validation checks and/or ensuring that the participant has agreed to the terms of participation, for example. If the information provided is determined to be valid at S505, at S506, the requested software (e.g., administrative interface 46) is transferred to the participant. The transfer process may take place using World Wide Web 10, for example. A determination is made whether or not the transfer has completed successfully at S507, and response processing continues at S502 to process another message received by market portal 403.

Another type of message that may be received is an order status message. Where it is determined at S502 that the message is an order status message, market portal 403 proceeds to process the message as described in Figure 8 which provides a flow diagram of process steps to respond to an order status message according to the present invention. If it is determined, at S802, that the message is not an order status message, processing continues at S502 to process this or another received message. If, however, it is determined that the message is an order status message, the order status message may be a request for status or an update of an order's status. Thus, at S804 a determination is made whether the order status message is a status request or status update. If it is determined that the message is a status request,

the order's status is retrieved from photo market database 52 at S804 and forwarded to the requester.

Otherwise, a determination is made at S805 whether or not the order status message is a status update. If not, processing continues at S502 to process this or another received message. If the order status message is a status update, photo market database 52 is updated at S806. A determination is made, at S807 whether or not the order status message indicates completion of the order. If not, processing continues at S502. If the order status message indicates that an order is complete, the interactive photo shop is notified at S808, and the user's payment information and the payment scheme are retrieved from photo market database 52 at S809 and S810, respectively. At S811, payment is distributed or caused to be distributed according to the retrieved payment scheme.

An order may be placed pursuant to an agreement between interactive photo shop 402 to purchase and photo service provider 404 to supply a specified quantity of a product (or products). In such a case, market portal 403 tracks each order as a microtransaction of the overall transaction defined in the agreement. Thus, at S812, market portal 403 determines whether or not the order is a microtransaction. If not, processing continues at S502 to process other received messages. If the order is determined to be a microtransaction, market portal 403 updates photo market database 52 to reflect the microtransaction, and processing continues at S502 to await another message. For example, market portal 403 increments a number that reflects the quantity of the product in previous orders as well as the completed order's quantity.

Figure 7 provides a flow diagram of process steps to respond to an order message received by

market portal 403. At S702, a determination is made whether the received message is an order message. If not, processing continues at S502 to process this or another received message. If it is determined  
5 that the message is an order message, processing continues at S703 to determine whether or not the order is valid (e.g., valid product designations and payment information). If not, a notification is sent to interactive photo shop 402 and processing  
10 continues at S502 to process another received message.

If it is determined at S703 that a valid message is received, processing continues at S705 to determine which photo service provider 404 is to  
15 receive the order. The photo service provider may be selected prior to the placement of the current order, prior to the placement of any order, or as each order is received by market portal 403. Thus, at S705, a determination is made whether the photo  
20 service provider selection is to be performed or to use a photo service provider previously selected using the selection criteria established by interactive photo shop 402. If it is determined to perform a selection, S706 to S712 (described below)  
25 are performed to select a photo service provider. Regardless of the outcome of the determination at S705, S713 is performed wherein the order is forwarded to at least one of the selected photo service providers 404.

30 Steps S706 to S712 are performed to select one or more photo service providers 404. At S706, the selection criteria established by interactive photo shop 402 is retrieved from photo market database 52. At S707, a query (or other retrieval  
35 request) is generated from the selection criteria. At S708, the photo service providers 404 that meet the selection criteria are identified using the information from photo market database 52. At S709,

a determination is made whether any photo service providers 404 were identified. If not, a notification is sent to interactive photo shop 402. If so, processing continues at S711 to determine whether more than one photo service provider 404 was retrieved at S708. If so, one of the photo service providers 404 is selected based on criteria established by interactive photo shop 402 (i.e., "tie-breaking" criteria) to one of the photo service providers 404. For example, the photo service provider 404 offering the lowest price or being closest to interactive photo shop 402 and/or patron 401 may be selected over the other photo service providers 404. Preferably, market portal 403 updates the photo market database 52 to reflect the photo shop provider 404 identified in the selection process.

The selection criteria used in selecting photo service providers 404 is preferably sent to market portal 403 via administrative interface 46 in an administrative request. Figure 6 is a flow diagram of process steps to respond to a selection criteria administrative request according to the present invention. The request may be to update existing selection criteria or to provide new selection criteria, for example. Thus, at S603, a determination is made whether or not the request is to update existing selection criteria. If so, the selection criteria that is to be updated for the requesting interactive photo shop 402 is retrieved from photo market database 52 at S604.

Regardless of whether new or updated selection criteria is being provided in the request at S605, a selection criteria interface (e.g., a web page) is displayed at S605 wherein the new/changed selection criteria may be viewed and selection information entered. Preferably, the selection criteria interface comprises a listing of categories

of selection criteria and possible input. For example, the selection criteria interface may include price, quality, geographic location and shipping categories. Within the price category, there may be specific pricing alternatives or a more general selection (e.g., lowest price). The geographic category may provide options such as within a specific number of miles, or "closest" options, for example. Where the request is to update the selection criteria, the existing selection criteria is displayed in the selection criteria interface for editing, at S605.

At S606, a determination is made whether a submit request is entered in the selection criteria interface. If not, processing continues at step S605. If so, processing continues to retrieve the selection criteria from the selection criteria interface and update photo market database 52 at S607.

An administrative request may also be received by market portal 403 from photo service provider 404 to enter or update product and/or pricing information. Thus, if it is determined at S602 that such a request is received, a determination is made at S610 whether or not to retrieve existing data from photo market database 52. If so, the data is retrieved at S611. In either case, a product/pricing interface is displayed at S612. Preferably, a standardized product inventory is used and displayed in the product/pricing interface. Using the product/pricing interface, photo service provider 404 may enter pricing information for the desired products and then submit the information. If it is determined at S613 that a submit is received, processing continues at S614 to update photo market database 52 with the information entered by photo

service provider 404 in the product/pricing interface.

As discussed above, information associated with activities (e.g., orders) that flow through market portal 403 may be accumulated and provided to participants (e.g., interactive photo shop 402, photo service provider 404 and/or patron 401) as a service (with or without an associated fee) provided by market portal 403. If it is determined at S602 that a request for such data is received, processing continues at S620 to generate a query to retrieve the requested information from photo market database 52. At S621, photo market database 52 is queried and the results are forwarded, at S622, to the requester or may be displayed in a metrics interface (e.g., one or more web pages).

Preferably, interactive photo shop 402 and photo service provider 404 register with market portal 403 prior to their participation. Thus, another administrative request that may be received by market portal 403 is a registration request. At S630, a registration interface is displayed wherein the requester enters information (e.g., name, address, email address, etc.). Access information (e.g., login and password) is assigned at S631.

As discussed above, an order may be placed pursuant to an agreement between interactive photo shop 402 to purchase and photo service provider 404 to supply a quantity of a product. Using administrative interface 46, for example, market portal 403 facilitates formation of such an agreement using a bidding mechanism. That is, using the present invention, bids from interactive photo shops 402 may be matched with bids from photo service providers 404 to form a new agreement, or a bid may be made on an existing agreement to transfer (i.e., buy or sell) the existing agreement to another interactive photo shop 402 and/or photo



service provider 404. Figures 9 to 11 are flow diagrams of process steps wherein participants may bid on all or a portion of new and existing agreements according to the present invention.

5 Referring to Figure 9, a flow diagram of process steps wherein interactive photo shops 402 can place a bid to purchase a product (or products) and photo service providers 404 to supply a product (or products) where matching bids from interactive  
10 photo shop 402 and photo service provider 404 occur, a "purchase/supply" agreement is formed between the participants having the matching bids. Market portal 403 registers the agreement in photo market database 52. At S902, a determination is made  
15 whether or not a bid request is received. If not processing returns to S502 to process this or another message. At S903, a determination is made whether the bid request relates to a new or existing bid. If it is determined that the request is for an  
20 existing bid, processing continues at S1002 of Figure 10 (described below) to respond to a request to transfer (e.g., to buy or sell) an existing purchase/supply agreement).

If, however, it is determined (at S903)  
25 that the request is a new bid, at S904, a new bid interface is displayed wherein a participant may enter bid information. For example, interactive photo shop 402 may identify the product (or products) that it wishes to purchase along with  
30 other terms (e.g., quantity and price information). Photo service provider 404 may use the new bid interface to enter product and term information (e.g., quantity and price information) for product (or products) that it wishes to supply. Once it is  
35 determined at S905 that a bid has been submitted, processing continues at S906 to initiate a matching operation on the current bids from the participating

interactive photo shops 402 and photo service providers 404.

5 A bid may remain in the bidding process for a specified period of time that may be set by market portal 403 and/or by the bidding participants. If a match is not found, the bid may still be matched against other, subsequently received, bids for the life of the bid.

10 At S907, a determination is made whether or not to use selection criteria established by interactive photo shop 402 participants to eliminate those bids from photo service provider participants that do not satisfy the selection criteria. If not, processing continues at S908 to compare the  
15 interactive photo shops 402 bids with all of the photo service providers 404 bids. Otherwise, only those bids from photo service providers 404 that satisfy the selection criteria are used in the comparison at S910. The result of the comparison  
20 performed either at S908 or S910 are input to S911 wherein a determination is made whether or not a bid match exists. If not, the bidders may be notified at S912 and processing continues at S502 to process another message.

25 If a match is determined to exist at S911, processing continues at S913 to notify the participants with the matching bids. In a case where a match is found, the participants with the matching bids enter into a "purchase/supply"  
30 agreement wherein interactive photo shop 402 agrees to purchase and photo service provider 404 agrees to supply a product (or products) according to the specified terms (e.g., the terms identified in the new bid interface. At S914, photo market database  
35 52 is updated to reflect this agreement.

An existing agreement may be transferred at the request of one of the parties to the agreement or as a result of an inquiry by another party.

Using the bidding mechanism of the present invention, an existing agreement may be transferred from one of the original (or current parties) to another party. Thus, for example, a subsequent  
5 interactive photo shop 402 may replace the current interactive photo shop 402 such that the subsequent interactive photo shop 402 agrees to purchase an amount of the product (or products) remaining under the agreement. Similarly, a subsequent photo  
10 service provider 404 may agree to supply the amount of the product (or products) remaining under the agreement. If some number of the product has already been purchased/supplied at the time of the transfer, the remaining amount is the original  
15 amount minus the number purchased/supplied. It is further possible, using the present invention to transfer (e.g., buy or sell) the remaining agreement to more than one bidder.

Referring to S1002 of Figure 10, a  
20 determination is made whether the bid request involves an existing agreement. If not, processing continues at S502 to process this or another message. If so, processing continues at S1003 to determine whether the bid request is a request to  
25 transfer from one of the parties to the agreement or a third party. If the transfer request is made by one other than a current party to the agreement, processing continues at S1102 of Figure 11 to process the request as described below. If the  
30 request is made by one of the parties to the agreement, processing continues at S1004 to retrieve information about the agreement from photo market database 52. Using the retrieved information, a determination is made whether or not the agreement  
35 is transferable at S1005. The agreement may not be transferable if, for example, the parties so specified in the terms of the agreement.

If it is determined at S1005 that the agreement is nontransferable, the requesting party is notified at S1006 and processing continues at S502 to process another message. Otherwise, processing continues at S1007 to locate an existing bid, in photo market database 52, that matches the terms of the transferable agreement. That is, a determination is made whether or not there is an existing bid by a third party to purchase such an agreement. For example, where an interactive photo shop 402 that is a party to an agreement to purchase a product (or products) wishes to transfer the agreement, photo market database 52 is searched to find a suitable bid. Similarly, photo market database 52 may be searched to find a suitable bid from a photo service provided 404 in response to a request from a photo service provider 404 who is a party to an agreement. If a bidder is determined to not exist at S1008, processing continues at S1009 to retain the transfer request so that it may be matched against future bids.

Where it is determined (at S1008) that an existing bid matches the terms of the agreement, processing continues at S1011 to determine whether there is more than one bidder. If so, processing continues at S1012 to select one of the bids using the remaining party's "tie-breaking" criteria. For example, the "tie-breaking" criteria may specify that the highest bidder be selected.

As the transfer may be for less than the remaining quantity of product (e.g., the original amount lessened by the amount already purchased/supplied), a determination is made at S1013 whether or not this is the case. If so, the old agreement is partitioned into separate agreements at S1014 to reflect that there now exists an agreement between the remaining party and the new party and the old agreement is updated to exclude

the transferred portion of the agreement. For example, the bid may be provided by an interactive photo shop 402 that agrees to purchase 50% of the remaining product quantity. In such a case, the old  
5 agreement is updated to reflect the transfer and the original interactive agreement is reduced to reflect the transfer.

Whether some or all of the agreement is being transferred, processing continues at S1015 to  
10 update the existing agreement and the parties are notified of the transfer at S1016.

The bidding mechanism of the present invention may be used to bid on an agreement where the parties to the agreement have not previously  
15 requested such a transfer (e.g., an unsolicited bid). Referring to S1102 of Figure 11, a determination is made whether a request is such an unsolicited bid. If not, processing continues at S502 to process this or another request. If so, at  
20 S1103, information associated with transferable agreements is retrieved from photo market database 52. At S1104, a determination is made whether any such agreements were retrieved. If no transferable bids were located at S1103, the requester is  
25 notified at S1105 and processing continues at S502 to process another message.

If one or more transferable agreements were found, information about those agreements may be displayed at S1106 such that the requester may  
30 select one. If the requester chooses not to select one of the displayed agreements at S1107, processing continues at S502 to process another message. If the requester makes a selection, processing continues at S1109 to notify the existing parties  
35 and, where applicable, to obtain their approval of the transfer. At S1111, the agreement is updated in photo market database 52 to reflect the transfer and the parties are notified.

While the present invention is described above with respect to what is currently considered its preferred embodiments, it is to be understood that the invention is not limited to that described above. To the contrary, the invention is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.

11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100  
101  
102  
103  
104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115  
116  
117  
118  
119  
120  
121  
122  
123  
124  
125  
126  
127  
128  
129  
130  
131  
132  
133  
134  
135  
136  
137  
138  
139  
140  
141  
142  
143  
144  
145  
146  
147  
148  
149  
150  
151  
152  
153  
154  
155  
156  
157  
158  
159  
160  
161  
162  
163  
164  
165  
166  
167  
168  
169  
170  
171  
172  
173  
174  
175  
176  
177  
178  
179  
180  
181  
182  
183  
184  
185  
186  
187  
188  
189  
190  
191  
192  
193  
194  
195  
196  
197  
198  
199  
200  
201  
202  
203  
204  
205  
206  
207  
208  
209  
210  
211  
212  
213  
214  
215  
216  
217  
218  
219  
220  
221  
222  
223  
224  
225  
226  
227  
228  
229  
230  
231  
232  
233  
234  
235  
236  
237  
238  
239  
240  
241  
242  
243  
244  
245  
246  
247  
248  
249  
250  
251  
252  
253  
254  
255  
256  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274  
275  
276  
277  
278  
279  
280  
281  
282  
283  
284  
285  
286  
287  
288  
289  
290  
291  
292  
293  
294  
295  
296  
297  
298  
299  
300  
301  
302  
303  
304  
305  
306  
307  
308  
309  
310  
311  
312  
313  
314  
315  
316  
317  
318  
319  
320  
321  
322  
323  
324  
325  
326  
327  
328  
329  
330  
331  
332  
333  
334  
335  
336  
337  
338  
339  
340  
341  
342  
343  
344  
345  
346  
347  
348  
349  
350  
351  
352  
353  
354  
355  
356  
357  
358  
359  
360  
361  
362  
363  
364  
365  
366  
367  
368  
369  
370  
371  
372  
373  
374  
375  
376  
377  
378  
379  
380  
381  
382  
383  
384  
385  
386  
387  
388  
389  
390  
391  
392  
393  
394  
395  
396  
397  
398  
399  
400  
401  
402  
403  
404  
405  
406  
407  
408  
409  
410  
411  
412  
413  
414  
415  
416  
417  
418  
419  
420  
421  
422  
423  
424  
425  
426  
427  
428  
429  
430  
431  
432  
433  
434  
435  
436  
437  
438  
439  
440  
441  
442  
443  
444  
445  
446  
447  
448  
449  
450  
451  
452  
453  
454  
455  
456  
457  
458  
459  
460  
461  
462  
463  
464  
465  
466  
467  
468  
469  
470  
471  
472  
473  
474  
475  
476  
477  
478  
479  
480  
481  
482  
483  
484  
485  
486  
487  
488  
489  
490  
491  
492  
493  
494  
495  
496  
497  
498  
499  
500  
501  
502  
503  
504  
505  
506  
507  
508  
509  
510  
511  
512  
513  
514  
515  
516  
517  
518  
519  
520  
521  
522  
523  
524  
525  
526  
527  
528  
529  
530  
531  
532  
533  
534  
535  
536  
537  
538  
539  
540  
541  
542  
543  
544  
545  
546  
547  
548  
549  
550  
551  
552  
553  
554  
555  
556  
557  
558  
559  
560  
561  
562  
563  
564  
565  
566  
567  
568  
569  
570  
571  
572  
573  
574  
575  
576  
577  
578  
579  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
590  
591  
592  
593  
594  
595  
596  
597  
598  
599  
600  
601  
602  
603  
604  
605  
606  
607  
608  
609  
610  
611  
612  
613  
614  
615  
616  
617  
618  
619  
620  
621  
622  
623  
624  
625  
626  
627  
628  
629  
630  
631  
632  
633  
634  
635  
636  
637  
638  
639  
640  
641  
642  
643  
644  
645  
646  
647  
648  
649  
650  
651  
652  
653  
654  
655  
656  
657  
658  
659  
660  
661  
662  
663  
664  
665  
666  
667  
668  
669  
670  
671  
672  
673  
674  
675  
676  
677  
678  
679  
680  
681  
682  
683  
684  
685  
686  
687  
688  
689  
690  
691  
692  
693  
694  
695  
696  
697  
698  
699  
700  
701  
702  
703  
704  
705  
706  
707  
708  
709  
710  
711  
712  
713  
714  
715  
716  
717  
718  
719  
720  
721  
722  
723  
724  
725  
726  
727  
728  
729  
730  
731  
732  
733  
734  
735  
736  
737  
738  
739  
740  
741  
742  
743  
744  
745  
746  
747  
748  
749  
750  
751  
752  
753  
754  
755  
756  
757  
758  
759  
760  
761  
762  
763  
764  
765  
766  
767  
768  
769  
770  
771  
772  
773  
774  
775  
776  
777  
778  
779  
780  
781  
782  
783  
784  
785  
786  
787  
788  
789  
790  
791  
792  
793  
794  
795  
796  
797  
798  
799  
800  
801  
802  
803  
804  
805  
806  
807  
808  
809  
810  
811  
812  
813  
814  
815  
816  
817  
818  
819  
820  
821  
822  
823  
824  
825  
826  
827  
828  
829  
830  
831  
832  
833  
834  
835  
836  
837  
838  
839  
840  
841  
842  
843  
844  
845  
846  
847  
848  
849  
850  
851  
852  
853  
854  
855  
856  
857  
858  
859  
860  
861  
862  
863  
864  
865  
866  
867  
868  
869  
870  
871  
872  
873  
874  
875  
876  
877  
878  
879  
880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
890  
891  
892  
893  
894  
895  
896  
897  
898  
899  
900  
901  
902  
903  
904  
905  
906  
907  
908  
909  
910  
911  
912  
913  
914  
915  
916  
917  
918  
919  
920  
921  
922  
923  
924  
925  
926  
927  
928  
929  
930  
931  
932  
933  
934  
935  
936  
937  
938  
939  
940  
941  
942  
943  
944  
945  
946  
947  
948  
949  
950  
951  
952  
953  
954  
955  
956  
957  
958  
959  
960  
961  
962  
963  
964  
965  
966  
967  
968  
969  
970  
971  
972  
973  
974  
975  
976  
977  
978  
979  
980  
981  
982  
983  
984  
985  
986  
987  
988  
989  
990  
991  
992  
993  
994  
995  
996  
997  
998  
999  
1000  
1001  
1002  
1003  
1004  
1005  
1006  
1007  
1008  
1009  
1010  
1011  
1012  
1013  
1014  
1015  
1016  
1017  
1018  
1019  
1020  
1021  
1022  
1023  
1024  
1025  
1026  
1027  
1028  
1029  
1030  
1031  
1032  
1033  
1034  
1035  
1036  
1037  
1038  
1039  
1040  
1041  
1042  
1043  
1044  
1045  
1046  
1047  
1048  
1049  
1050  
1051  
1052  
1053  
1054  
1055  
1056  
1057  
1058  
1059  
1060  
1061  
1062  
1063  
1064  
1065  
1066  
1067  
1068  
1069  
1070  
1071  
1072  
1073  
1074  
1075  
1076  
1077  
1078  
1079  
1080  
1081  
1082  
1083  
1084  
1085  
1086  
1087  
1088  
1089  
1090  
1091  
1092  
1093  
1094  
1095  
1096  
1097  
1098  
1099  
1100  
1101  
1102  
1103  
1104  
1105  
1106  
1107  
1108  
1109  
1110  
1111  
1112  
1113  
1114  
1115  
1116  
1117  
1118  
1119  
1120  
1121  
1122  
1123  
1124  
1125  
1126  
1127  
1128  
1129  
1130  
1131  
1132  
1133  
1134  
1135  
1136  
1137  
1138  
1139  
1140  
1141  
1142  
1143  
1144  
1145  
1146  
1147  
1148  
1149  
1150  
1151  
1152  
1153  
1154  
1155  
1156  
1157  
1158  
1159  
1160  
1161  
1162  
1163  
1164  
1165  
1166  
1167  
1168  
1169  
1170  
1171  
1172  
1173  
1174  
1175  
1176  
1177  
1178  
1179  
1180  
1181  
1182  
1183  
1184  
1185  
1186  
1187  
1188  
1189  
1190  
1191  
1192  
1193  
1194  
1195  
1196  
1197  
1198  
1199  
1200  
1201  
1202  
1203  
1204  
1205  
1206  
1207  
1208  
1209  
1210  
1211  
1212  
1213  
1214  
1215  
1216  
1217  
1218  
1219  
1220  
1221  
1222  
1223  
1224  
1225  
1226  
1227  
1228  
1229  
1230  
1231  
1232  
1233  
1234  
1235  
1236  
1237  
1238  
1239  
1240  
1241  
1242  
1243  
1244  
1245  
1246  
1247  
1248  
1249  
1250  
1251  
1252  
1253  
1254  
1255  
1256  
1257  
1258  
1259  
1260  
1261  
1262  
1263  
1264  
1265  
1266  
1267  
1268  
1269  
1270  
1271  
1272  
1273  
1274  
1275  
1276  
1277  
1278  
1279  
1280  
1281  
1282  
1283  
1284  
1285  
1286  
1287  
1288  
1289  
1290  
1291  
1292  
1293  
1294  
1295  
1296  
1297  
1298  
1299  
1300  
1301  
1302  
1303  
1304  
1305  
1306  
1307  
1308  
1309  
1310  
1311  
1312  
1313  
1314  
1315  
1316  
1317  
1318  
1319  
1320  
1321  
1322  
1323  
1324  
1325  
1326  
1327  
1328  
1329  
1330  
1331  
1332  
1333  
1334  
1335  
1336  
1337  
1338  
1339  
1340  
1341  
1342  
1343  
1344  
1345  
1346  
1347  
1348  
1349  
1350  
1351  
1352  
1353  
1354  
1355  
1356  
1357  
1358  
1359  
1360  
1361  
1362  
1363  
1364  
1365  
1366  
1367  
1368  
1369  
1370  
1371  
1372  
1373  
1374  
1375  
1376  
1377  
1378  
1379  
1380  
1381  
1382  
1383  
1384  
1385  
1386  
1387  
1388  
1389  
1390  
1391  
1392  
1393  
1394  
1395  
1396  
1397  
1398  
1399  
1400  
1401  
1402  
1403  
1404  
1405  
1406  
1407  
1408  
1409  
1410  
1411  
1412  
1413  
1414  
1415  
1416  
1417  
1418  
1419  
1420  
1421  
1422  
1423  
1424  
1425  
1426  
1427  
1428  
1429  
1430  
1431  
1432  
1433  
1434  
1435  
1436  
1437  
1438  
1439  
1440  
1441  
1442  
1443  
1444  
1445  
1446  
1447  
1448  
1449  
1450  
1451  
1452  
1453  
1454  
1455  
1456  
1457  
1458  
1459  
1460  
1461  
1462  
1463  
1464  
1465  
1466  
1467  
1468  
1469  
1470  
1471  
1472  
1473  
1474  
1475  
1476  
1477  
1478  
1479  
1480  
1481  
1482  
1483  
1484  
1485  
1486  
1487  
1488  
1489  
1490  
1491  
1492  
1493  
1494  
1495  
1496  
1497  
1498  
1499  
1500  
1501  
1502  
1503  
1504  
1505  
1506  
1507  
1508  
1509  
1510  
1511  
1512  
1513  
1514  
1515  
1516  
1517  
1518  
1519  
1520  
1521  
1522  
1523  
1524  
1525  
1526  
1527  
1528  
1529  
1530  
1531  
1532  
1533  
1534  
1535  
1536  
1537  
1538  
1539  
1540  
1541  
1542  
1543  
1544  
1545  
1546  
1547  
1548  
1549  
1550  
1551  
1552  
1553  
1554  
1555  
1556  
1557  
1558  
1559  
1560  
1561  
1562  
1563  
1564  
1565  
1566  
1567  
1568  
1569  
1570  
1571  
1572  
1573  
1574  
1575  
1576  
1577  
1578  
1579  
1580  
1581  
1582  
1583  
1584  
1585  
1586  
1587  
1588  
1589  
1590  
1591  
1592  
1593  
1594  
1595  
1596  
1597  
1598  
1599  
1600  
1601  
1602  
1603  
1604  
1605  
1606  
1607  
1608  
1609  
1610  
1611  
1612  
1613  
1614  
1615  
1616  
1617  
1618  
1619  
1620  
1621  
1622  
1623  
1624  
1625  
1626  
1627  
1628  
1629  
1630  
1631  
1632  
1633  
1634  
1635  
1636  
1637  
1638  
1639  
1640  
1641  
1642  
1643  
1644  
1645  
1646  
1647  
1648  
1649  
1650  
1651  
1652  
1653  
1654  
1655  
1656  
1657  
1658  
1659  
1660  
1661  
1662  
1663  
1664  
1665  
1666  
1667  
1668  
1669  
1670  
1671  
1672  
1673  
1674  
1675  
1676  
1677  
1678  
1679  
1680  
1681  
1682  
1683  
1684  
1685  
1686  
1687  
1688  
1689  
1690  
1691  
1692  
1693  
1694  
1695  
1696  
1697  
1698  
1699  
1700  
1701  
1702  
1703  
1704  
1705  
1706  
1707  
1708  
1709  
1710  
1711  
1712  
1713  
1714  
1715  
1716  
1717  
1718  
1719  
1720  
1721  
1722  
1723  
1724  
1725  
1726  
1727  
1728  
1729  
1730  
1731  
1732  
1733  
1734  
1735  
1736  
1737  
1738  
1739  
1740  
1741  
1742  
1743  
1744  
1745  
1746  
1747  
1748  
1749  
1750  
1751  
1752  
1753  
1754  
1755  
1756  
1757  
1758  
1759  
1760  
1761  
1762  
1763  
1764  
1765  
1766  
1767  
1768  
1769  
1770  
1771  
1772  
1773  
1774  
1775  
1776  
1777  
1778  
1779  
1780  
1781  
1782  
1783  
1784  
1785  
1786  
1787  
1788  
1789  
1790  
1791  
1792  
1793  
1794  
1795  
1796  
1797  
1798  
1799  
1800  
1801  
1802  
1803  
1804  
1805  
1806  
1807  
1808  
1809  
1810  
1811  
1812  
1813  
1814  
1815  
1816  
1817  
1818  
1819  
1820  
1821  
1822  
1823  
1824  
1825  
1826  
1827  
1828  
1829  
1830  
1831  
1832  
1833  
1834  
1835  
1836  
1837  
1838  
1839  
1840  
1841  
1842  
1843  
1844  
1845  
1846  
1847  
1848  
1849  
1850  
1851  
1852  
1853  
1854  
1855  
1856  
1857  
1858  
1859  
1860  
1861  
1862  
1863  
1864  
1865  
1866  
1867  
1868  
1869  
1870  
1871  
1872  
1873  
1874  
1875  
1876  
1877  
1878  
1879  
1880  
1881  
1882  
1883  
1884  
1885  
1886  
1887  
1888  
1889  
1890  
1891  
1892  
1893  
1894  
1895  
1896  
1897  
1898  
1899  
1900  
1901  
1902  
1903  
1904  
1905  
1906  
1907  
1908  
1909  
1910  
1911  
1912  
1913  
1914  
1915  
1916  
1917  
1918  
1919  
1920  
1921  
1922  
1923  
1924  
1925  
1926  
1927  
1928  
1929  
1930  
1931  
1932  
1933  
1934  
1935  
1936  
1937  
1938  
1939  
1940  
1941  
1942  
1943  
1944  
1945  
1946  
1947  
1948  
1949  
1950  
1951  
1952  
1953  
1954  
1955  
1956  
1957  
1958  
1959  
1960  
1961  
1962  
1963  
1964  
1965  
1966  
1967  
1968  
1969  
1970  
1971  
1972  
1973  
1974  
1975  
1976  
1977  
1978  
1979  
1980  
1981  
1982  
1983  
1984  
1985  
1986  
1987  
1988  
1989  
1990  
1991  
1992  
1993  
1994  
1995  
1996  
1997  
1998  
1999  
2000  
2001  
2002  
2003  
2004  
2005  
2006  
2007  
2008  
2009  
2010  
2011  
2012  
2013  
2014  
2015  
2016  
2017  
2018  
2019  
2020  
2021  
2022  
2023  
2024  
2025  
2026  
2027  
2028  
2029  
2030  
2031  
2032  
2033  
2034  
2035  
2036  
2037  
2038  
2039  
2040  
2041  
2042  
2043  
2044  
2045  
2046  
2047  
2048  
2049  
2050  
2051  
2052  
2053  
2054  
2055  
2056  
2057  
2058  
2059  
2060  
2061  
2062  
2063  
2064  
2065  
2066  
2067  
2068  
2069  
2070  
2071  
2072  
2073  
2074  
2075  
2076  
2077  
2078  
2079  
2080  
2081  
2082  
2083  
2084  
2085  
2086  
2087  
2088  
2089  
2090  
2091  
2092  
2093  
2094  
2095  
2096  
2097  
2098  
2099  
2100  
2101  
2102  
2103  
2104  
2105  
2106  
2107  
2108  
2109  
2110  
2111  
2112  
2113  
2114  
2115  
2116  
2117  
2118  
2119  
2120  
2121  
2122  
2123  
2124  
2125  
2126  
2127  
2128  
2129  
2130  
2131  
2132  
2133  
2134  
2135  
2136  
2137  
2138  
2139  
2140  
2141  
2142  
2143  
2144  
2145  
2146  
2147  
2148  
2149  
2150  
2151  
2152  
2153  
2154  
2155  
2156  
2157  
2158  
2159  
2160  
2161  
2162  
2163  
2164  
2165  
2166  
2167  
2168  
2169  
2170  
2171  
2172  
2173  
2174  
2175  
2176  
2177  
2178  
2179  
2180  
2181  
2182  
2183  
2184  
2185  
2186  
2187  
2188  
2189  
2190  
2191  
2192  
2193  
2194  
2195  
2196  
2197  
2198  
2199  
2200  
2201  
2202  
2203  
2204  
2205  
2206  
2207  
2208  
2209  
2210  
2211  
2212  
2213  
2214  
2215  
2216  
2217  
2218  
2219  
2220  
2221  
2222  
2223  
2224  
2225  
2226  
2227  
2228

WHAT IS CLAIMED IS:

1. A method of creating a virtual print market place over a network comprising:

- 5           collecting market information, the market information comprising an identity of service providers and the print services and pricing provided by each of the service providers;  
            obtaining criteria established by an  
10          interactive shop for selecting service providers to provide the print services offered to patrons of the interactive shops; and  
            selecting service providers identified in the market information to provide the set of print  
15          services based on the criteria and the market information.

2. A method according to Claim 1, wherein an order is placed in the interactive shop, the  
20          method further comprising:

            forwarding an order placed in the interactive shop to at least one of the selected service providers via a market portal.

25          3. A method according to Claim 2, further comprising:

            transmitting digital data from the interactive shop to the at least one of the selected service providers via another communication channel  
30          that excludes the market portal.

4. A method according to Claim 1, further comprising:

            updating the market information to reflect  
35          amount, type and price of print services ordered in an interactive shop from a service provider.

5. A method according to Claim 1, further comprising:

5 updating the market information to reflect level of satisfaction associated with a service provider.

6. A method according to Claim 1 further comprising:

10 forwarding an order from the interactive shop to at least one of the selected service providers via a market portal;

transmitting a status of the order to the market portal; and

15 rendering payment when the market portal determines that the ordered print services have been provided.

7. A method according to Claim 6, the step of rendering payment further comprising:

20 collecting fees from a patron of the interactive shop that placed the order; and

rendering payment to the one of the selected service providers from the collected fees.

25 8. A method according to Claim 6 further comprising:

rendering a percentage of the fees collected from the patron as payment to the interactive shop.

30

9. A method according to Claim 6 further comprising:

35 rendering a percentage of the fees collected from the patron as payment to the provider providing the market portal.

10. A method according to Claim 1 wherein the step of selecting service providers is performed



in anticipation of the placement of an order for print services.

5           11. A method according to Claim 1 wherein the step of selecting service providers is performed in response to the placement of an order for print services.

10           12. A method according to Claim 1, further comprising:

              establishing a relationship between the interactive shop and a selected service provider guaranteeing the purchase and supply respectively of a certain quantity of a given service; and  
15           updating the market information to specify the quantity of the given service guaranteed.

              13. A method according to Claim 12 further comprising:

20           updating the quantity to reflect filled orders of the print services.

              14. A method according to Claim 1 wherein the market information includes an identity of  
25           interactive shops.

              15. A method of creating a virtual print market place over a network comprising:

30           collecting market information, the market information comprising an identity of service providers, interactive shops, a standardized set of print services and pricing provided by each of the service providers;

35           obtaining a bid from a service provider identifying a print service and terms for providing the print service;

obtaining a bid from an interactive shop identifying the print service and terms for purchasing the print service; and

5 establishing an agreement between the service provider and the interactive shop when the terms of the print service and the interactive shop are compatible wherein the service provider agrees to provide and the interactive shop agrees to purchase the service according to the terms.

10

16. A method according to Claim 15 wherein the terms include a price and quantity of the print service.

15

17. A method according to Claim 15 wherein the terms include a duration.

18. A method according to Claim 15 further comprising:

20

an obtaining step to obtain a bid from at least one other service provider to assume a portion of the service provider's agreement with the interactive shop; and

25

an establishing step to establish a new agreement between the at least one other service provider and the interactive shop.

30

19. A method according to Claim 18 wherein the portion of the agreement represents any remaining quantity of print services not already provided by the service provider.

35

20. A method according to Claim 18 wherein the portion of the agreement represents less than all of the remaining quantity of print services not already provided by the service provider.

21. A method according to Claim 15 further comprising:

an obtaining step to obtain a bid from at least one other interactive shop to assume a portion of the interactive shop's agreement with the service provider; and

an establishing step to establish a new agreement between the at least one other interactive shop and the service provider.

22. A method according to Claim 21 wherein the portion of the agreement represents any remaining quantity of print services not already purchased by the interactive shop.

23. A method according to Claim 21 wherein the portion of the agreement represents less than all of the remaining quantity of print services not already purchased by the interactive shop.

24. A computer-readable memory medium storing computer-executable process steps to create a virtual print market place over a network, the steps comprising.

a collecting step to collect market information, the market information comprising an identity of service providers and the print services and pricing provided by each of the service providers;

an obtaining step to obtain criteria established by an interactive shop for selecting service providers to provide print services offered to patrons of the interactive shops; and

a selecting step to select service providers identified in the market information to provide the set of print services based on the criteria and the market information.

25. A computer-readable memory medium storing computer-executable process steps according to Claim 24, wherein an order is placed in the interactive shop, further comprising:

5           a forwarding step to forward an order placed in the interactive shop to at least one of the selected service providers via a market portal.

26. A computer-readable memory medium storing computer-executable process steps according to Claim 25, further comprising:

10           a transmitting step to transmit digital data from the interactive shop to the at least one of the selected service providers via another communication channel that excludes the market portal.

27. A computer-readable memory medium storing computer-executable process steps according to Claim 24, further comprising:

20           an updating step to update the market information to reflect amount, type and price of print services ordered in an interactive shop from a service provider.

28. A computer-readable memory medium storing computer-executable process steps according Claim 24, further comprising:

25           an updating step to update the market information to reflect level of satisfaction associated with a service provider.

29. A computer-readable memory medium storing computer-executable process steps according to Claim 24 further comprising:

35           a forwarding step to forward an order from the interactive shop to at least one of the selected service providers via a market portal;

a transmitting step to transmit a status of the order to the market portal; and

a rendering step to render payment when the market portal determines that the ordered print services have been provided.

30. A computer-readable memory medium storing computer-executable process steps according to Claim 29, further comprising:

a collecting step to collect fees from a patron of the interactive shop that placed the order; and

a rendering step to render payment to the one of the selected service providers from the collected fees.

31. A computer-readable memory medium storing computer-executable process steps according Claim 29 further comprising:

rendering step to render a percentage of the fees collected from the patron as payment to the interactive shop.

32. A computer-readable memory medium storing computer-executable process steps according to Claim 29 further comprising:

a rendering step to render a percentage of the fees collected from the patron as payment to the provider providing the market portal.

33. A computer-readable memory medium storing computer-executable process steps according to Claim 24 wherein the step of selecting service providers is performed in anticipation of the placement of an order for print services.

34. A computer-readable memory medium storing computer-executable process steps according

to Claim 24 wherein the step of selecting service providers is performed in response to the placement of an order for print services.

5                   35. A computer-readable memory medium storing computer-executable process steps according to Claim 24, further comprising:

                  an establishing step to establish a relationship between the interactive shop and a  
10       selected service provider guaranteeing the purchase and supply respectively of a certain quantity of a given print service; and

                  an updating step to update the market information to specify the quantity of the given  
15       print service guaranteed.

                  36. A computer-readable memory medium storing computer-executable process steps according to Claim 35 further comprising:

20                   an updating step to update the quantity to reflect filled orders of the print services.

                  37. A computer-readable memory medium storing computer-executable process steps according to Claim 24 wherein the market information includes  
25       an identity of interactive shops.

                  38. A computer-readable memory medium storing computer-executable process steps to create  
30       a virtual print market place over a network, the steps comprising:

                  a collecting step to collect market information, the market information comprising an identity of service providers, interactive shops, a  
35       standardized set of print services and pricing provided by each of the service providers;

an obtaining step to obtain a supply bid from a service provider identifying a print service and terms for providing the print service;

5 an obtaining step to obtain a purchase bid from an interactive shop identifying the print service and terms for purchasing the print service; and

10 an establishing step to establish an agreement between the service provider and the interactive shop when the terms of the print service and the interactive shop are compatible wherein the service provider agrees to provide and the interactive shop agrees to purchase the print service according to the terms.

15 39. A computer-readable memory medium storing computer-executable process steps according to Claim 38 wherein the terms include a price and quantity of the print service.

20 40. A computer-readable memory medium storing computer-executable process steps according to Claim 38 wherein the terms include a duration.

25 41. A computer-readable memory medium storing computer-executable process steps according to Claim 38 further comprising:

30 an obtaining step to obtain a bid from at least one other service provider to assume a portion of the service provider's agreement with the interactive shop; and

35 an establishing step to establish a new agreement between the at least one other service provider and the interactive shop.

42. A computer-readable memory medium storing computer-executable process steps according to Claim 41 wherein the portion of the agreement

represents any remaining quantity of print service not already provided by the service provider.

5           43. A computer-readable memory medium  
storing computer-executable process steps according to Claim 41 wherein the portion of the agreement represents less than all of the remaining quantity of print service not already provided by the service provider.

10           44. A computer-readable memory medium  
storing computer-executable process steps according to Claim 38 further comprising:

15           an obtaining step to obtain a bid from at least one other interactive shop to assume a portion of the interactive shop's agreement with the service provider; and

20           an establishing step to establish a new agreement between the at least one other interactive shop and the service provider.

25           45. A computer-readable memory medium  
storing computer-executable process steps according to Claim 44 wherein the portion of the agreement represents any remaining quantity of print service not already purchased by the interactive shop.

30           46. A computer-readable memory medium  
storing computer-executable process steps according to Claim 44 wherein the portion of the agreement represents less than all of the remaining quantity of print service not already purchased by the interactive shop.

35



ABSTRACT

A method to create a virtual print market place using one or more interconnected computers comprising collecting market information comprising an identity of service providers and the print services and pricing provided by each, obtaining criteria established by an interactive shop for selecting service providers to provide print services offered to patrons of the interactive shops; and selecting service providers to provide the set of print services based on the criteria and the market information. In another aspect, a method of creating a market place is provided comprising obtaining bids from service providers identifying print services and terms for providing the print services as well as from interactive shops identifying print services and terms for purchasing the print services and establishing an agreement between the service provider and the interactive shop when the terms are compatible.



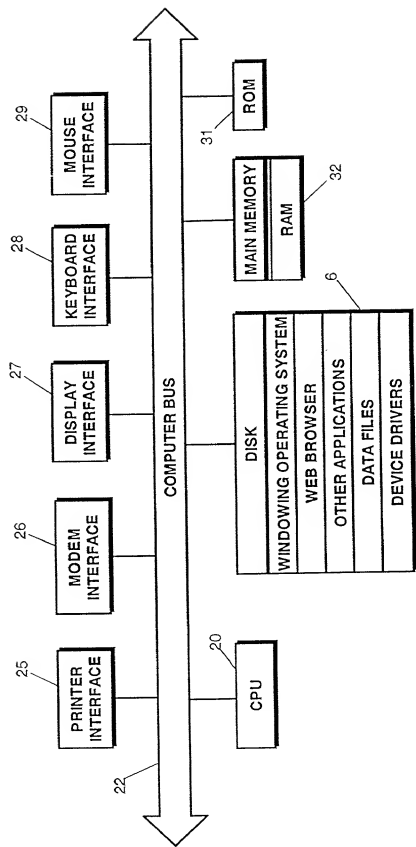
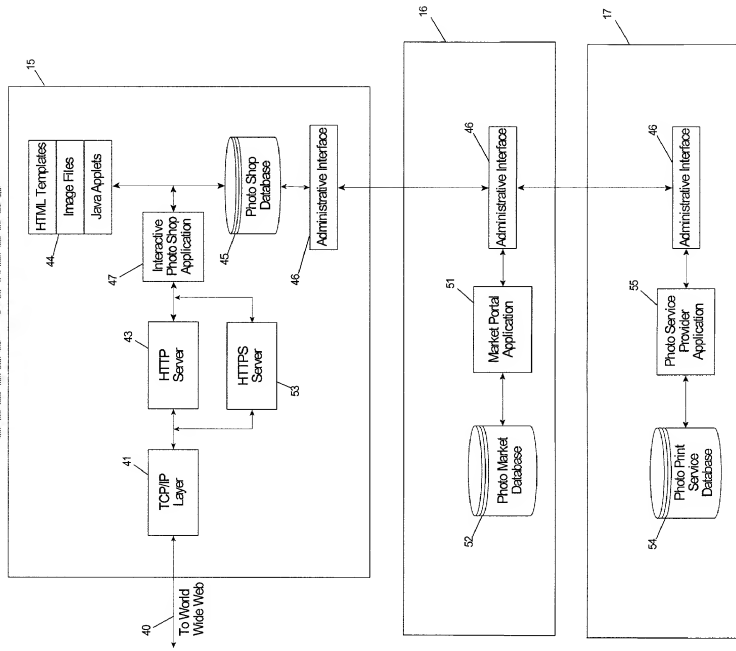


Fig. 2



**Fig. 3**

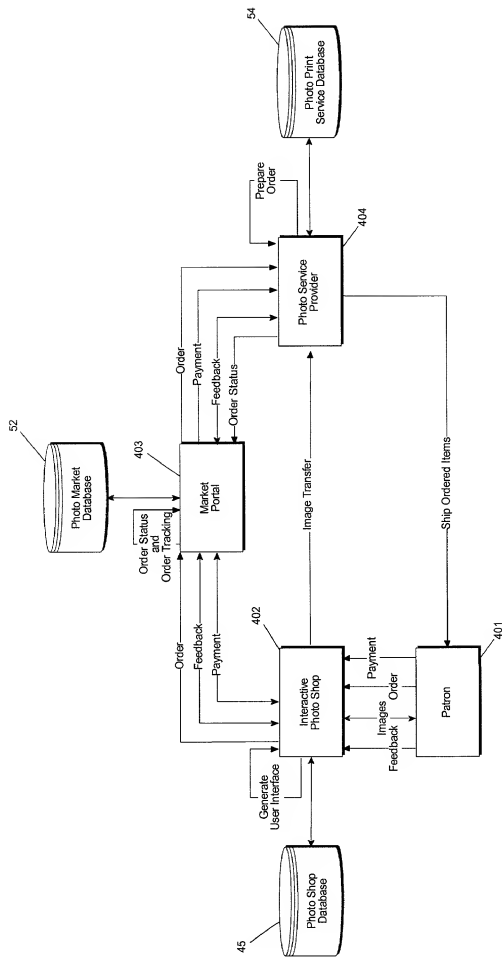


Fig. 4

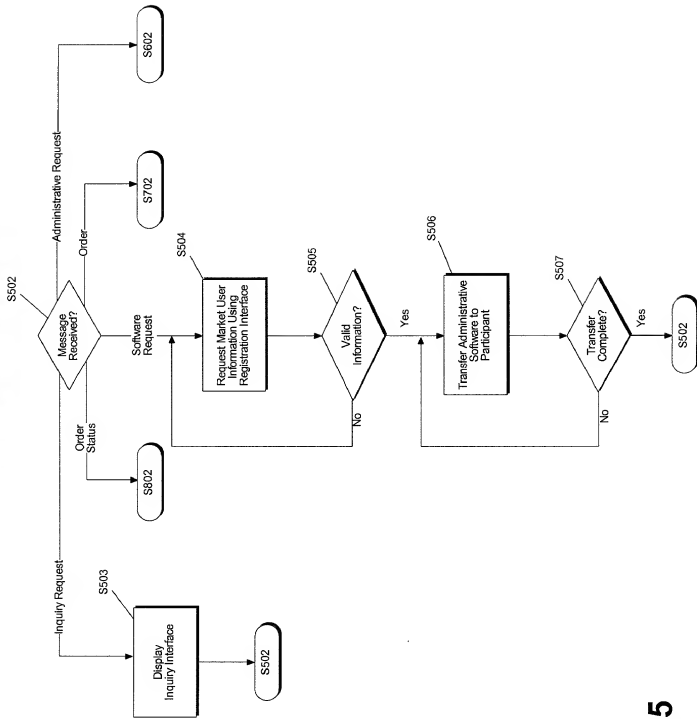
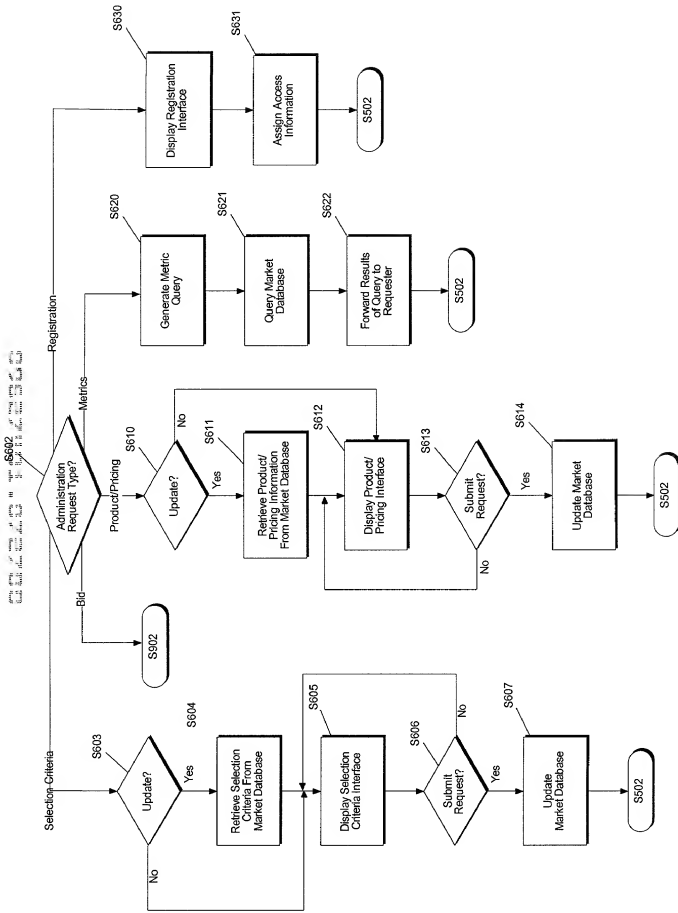
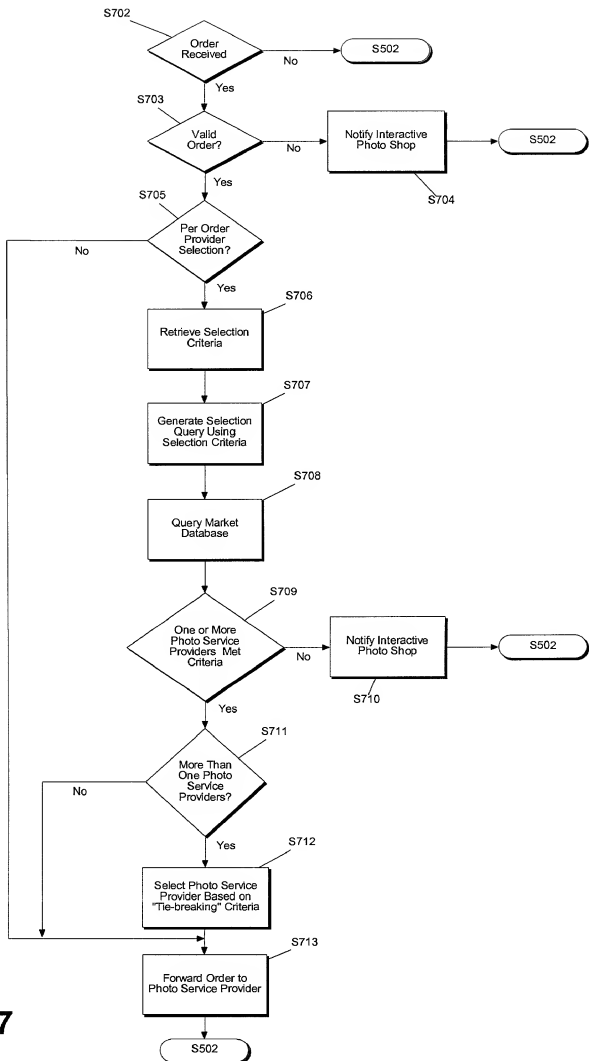


Fig. 5

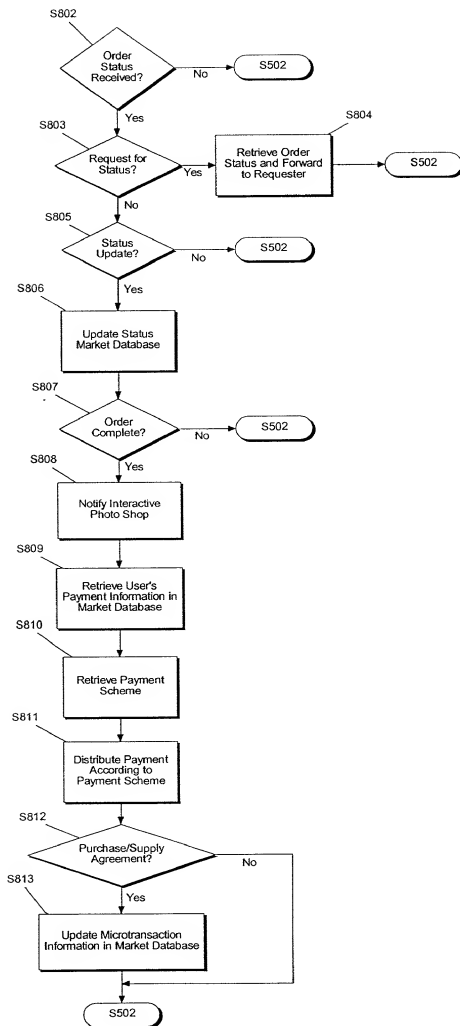


**Fig. 6**

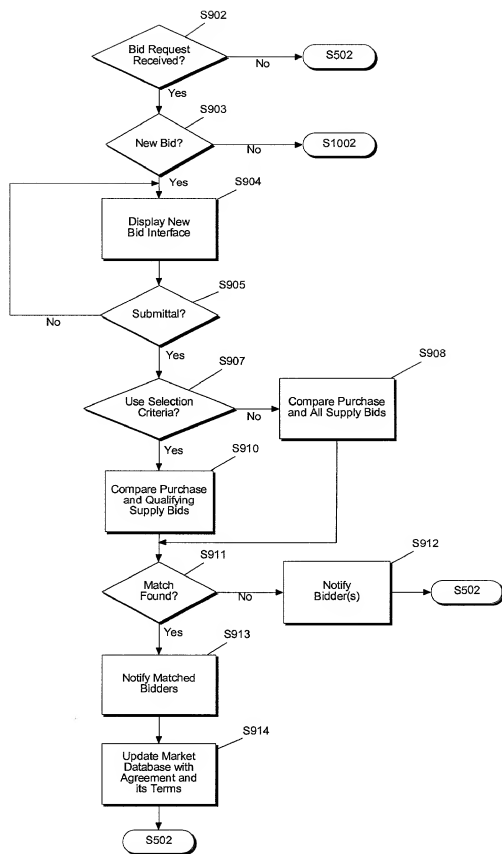


**Fig. 7**

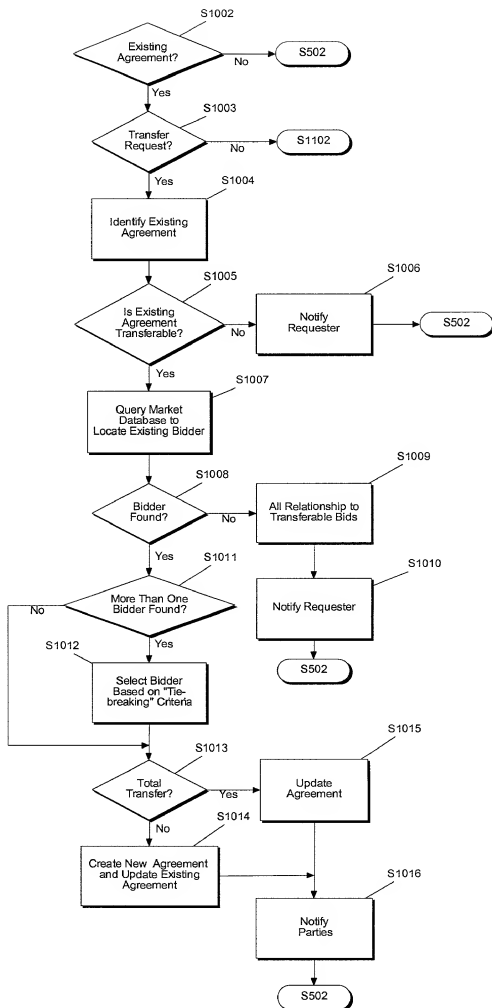




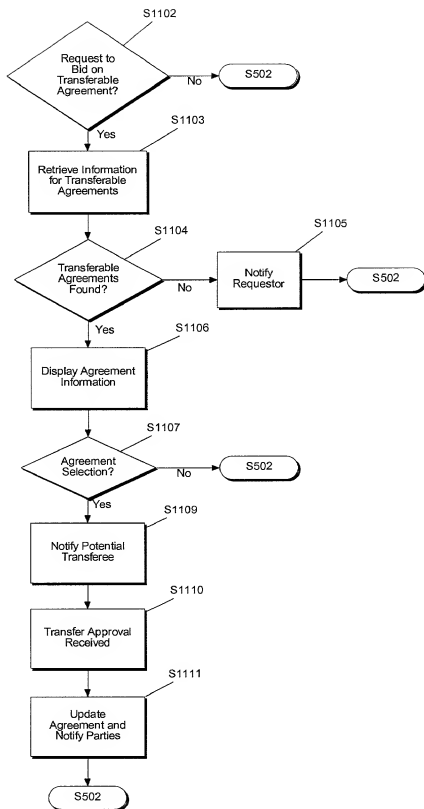
**Fig. 8**



**Fig. 9**



**Fig. 10**



**Fig. 11**

COMBINED DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION

(Page 1)

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled \_\_\_\_\_

**VIRTUAL PRINT MARKET PLACE**

(Attorney Docket # 36.P266)

the specification of which ☒ is attached hereto ☐ was filed on \_\_\_\_\_ as  
United States Application No. or PCT International Application No. \_\_\_\_\_  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b), of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designates at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed:

			(Yes/No)
<u>Country</u>	<u>Application No.</u>	<u>Filed (Day/Mo./Yr.)</u>	<u>Priority Claimed</u>

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

<u>Application No.</u>	<u>Filed (Day/Mo./Yr.)</u>
------------------------	----------------------------

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

		Status
<u>Application No.</u>	<u>Filed (Day/Mo./Yr.)</u>	<u>(Patented, Pending, Abandoned)</u>

COMBINED DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION

(Page 2)

I hereby appoint the practitioners associated with the firm and Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to the address associated with that Customer Number:

**FITZPATRICK, CELLA, HARPER & SCINTO**  
Customer Number: 05514

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Sole or First Inventor Thomas A. Cocotis

Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_

Citizen/Subject of United States

Residence 6000 Garden Grove Boulevard, Apartment 206, Westminster,  
CA 92683-1952

Post Office Address c/o Canon Information Systems, Inc.

110 Innovation Drive, Irvine, CA 92612

Full Name of Second Joint Inventor, if any Donald Parke Gibson

Second Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_

Citizen/Subject of United States

Residence 28520 Brush Canyon Drive, Yorba Linda, CA 92887

Post Office Address c/o Canon Information Systems, Inc.

110 Innovation Drive, Irvine, CA 92612